

IN THE CLAIMS

Please amend the claims as follows:

1. (Amended) A method for amplification of at least one nucleic acid, comprising the following steps:-

(1) forming at least one nucleic acid template comprising a nucleic acid to be amplified, wherein the nucleic acid contains at the 5' end an oligonucleotide sequence Y and at the 3' end an oligonucleotide sequence Z and, the nucleic acid carries at the 5' end a means for attaching the nucleic acid to a solid support;

22 09806531-101901
(2) mixing the at least one nucleic acid template with one or more colony primers X, which can hybridize to the oligonucleotide sequence Z and carries at the 5' end a means for attaching the colony primers to a solid support, in the presence of a solid support so that the 5' ends of both the at least one nucleic acid template and the colony primers bind to the solid support;

(3) performing one or more nucleic acid amplification reactions on the bound template, so that nucleic acid colonies are generated.

13
3. (Amended) A method as claimed in claim 1, wherein two different colony primers X are mixed with the at least one nucleic acid template in step (2), and wherein the sequences of colony primers X are such that the oligonucleotide sequence Z can hybridise to one of the colony primers X and the oligonucleotide sequence Y is the same as one of the colony primers X.

4. (Amended) A method for amplification of at least one nucleic acid, comprising the following steps:-

(1) forming at least one nucleic acid template comprising a nucleic acid to be amplified, wherein the nucleic acid carries at the 5' end a means for attaching the nucleic acid to a solid support;

(2) mixing the at least one nucleic acid template with one or more degenerate colony primers X, which can hybridize to an oligonucleotide sequence in the at least one template at a site flanking the nucleic acid sequence which is to be amplified and carries at the 5' end a means for attaching the colony primers to a solid support, in the presence of a solid support so that the 5' ends of both the nucleic acid template and the colony primers bind to the solid support;

(3) performing one or more nucleic acid amplification reactions on the bound template, so that nucleic acid colonies are generated.

5. (Amended) A method as claimed in claim 1, further comprising the additional step of performing at least one step of sequence determination of one or more of the nucleic acid colonies generated.

6. (Amended) A method as claimed in claim 5, wherein the sequence determination step involves the incorporation and detection of labeled oligonucleotides.

7. (Amended) A method as claimed in claim 5, wherein the full or partial sequences of the amplified nucleic acid templates present in more than one nucleic acid colonies are determined simultaneously.

8. (Amended) A method as claimed in claim 5, further comprising the additional step of visualizing the colonies generated.

9. (Amended) A method as claimed in claim 8, wherein said visualization step involves the use of a labeled or unlabelled nucleic acid probe.

10. (Amended) A method as claimed in claim 1, wherein the means for attaching the nucleic acid template and the colony primers to the solid support comprises a means for attaching the nucleic acid sequences covalently to the said support.

14. (Amended) A method as claimed in claim 1, wherein the solid support is selected from the group consisting of latex beads, dextran beads, polystyrene, polypropylene surfaces, polyacrylamide gel, gold surfaces, glass surfaces, and silicon wafers.

15. (Amended) A method as claimed in claim 14, wherein the solid support is glass.

16. (Amended) A method as claimed in claim 1, wherein the density of the nucleic acid colonies generated is 10,000/mm² to 100,000/mm².

17. (Amended) A method as claimed in claim 1, wherein the density of colony primers X attached to the solid support is at least 1 fmol/mm².

18. (Amended) A method as claimed in claim 1, wherein the density of nucleic acid templates is 10,000/mm² to 100,000/mm².

19. (Amended) A plurality of different nucleic acid templates comprising the nucleic acids to be amplified, wherein each of said nucleic acids contain at their 5' ends a known oligonucleotide sequence Y and at the 3' end a known oligonucleotide sequence Z and the nucleic acids carry at the 5' end a means for attaching the nucleic acids to a solid support.

20. (Amended) The plurality of nucleic acid templates of claim 19, wherein oligonucleotide sequence Z is complementary to oligonucleotide sequence Y.

21. (Amended) The plurality of nucleic acid templates as claimed in claim 19 mixed with a plurality of colony primers X which can hybridise to the oligonucleotide sequence Z and carry at their 5' ends a means for attaching the colony primers to a solid support.

23. (Amended) A plurality of nucleic acid templates as claimed in claim 19 mixed with two different colony primers X, wherein the sequences of colony primers X are such that the oligonucleotide sequence Z can hybridise to one of the colony primers X and the oligonucleotide sequence Y is the same as one of the colony primers X.

24. (Amended) A plurality of nucleic acid templates as claimed in claim 21, wherein the colony primers X comprise

a degenerate primer sequence and the nucleic acid templates do not contain oligonucleotide sequences Y or Z.

25. (Amended) A solid support to which there is attached a plurality of colony primers X as defined in claim 1 and a plurality of nucleic acid templates comprising the nucleic acids to be amplified, wherein each of said nucleic acids contain at their 5' ends a known oligonucleotide sequence Y and at the 3' end a known oligonucleotide sequence Z and the nucleic acids carry at the 5' end a means for attaching the nucleic acids to a solid support.

26. (Amended) A solid support as claimed in claim 25, wherein the solid support is selected from the group consisting of latex beads, dextran beads, polystyrene, polypropylene surfaces, polyacrylamide gel, gold surfaces, glass surfaces, and silicon wafers.

27. (Amended) A solid support as claimed in claim 25, wherein the attachment of nucleic acid templates and colony primers to the solid support is covalent.

28. (Amended) A solid support comprising one or more nucleic acid colonies generated by a method as defined in claim 1.

Claims 29-32 has been deleted.

33. (Amended) A kit for use in nucleic acid amplification or sequencing, comprising a plurality of nucleic acid templates as defined in claim 19 and one or more colony primers X bound to a solid support, which one or more colony